Work Order ID 97707 Page 1 February-21-13 12:41:09 PM Item ID: D3016-041 Accept *N900040100* Setup Start **Revision ID:** Seat Frame Assembly Item Name: **Start Date:** 2/21/13 Start Oty: 1.00 **Cust Item ID:** Req'd Qty: 1.00 Required Date: 2/28/13 **Customer:** Reference: Run Process Plan: MLJ Date: 13-02-21 Tooling: Approvals: Date: Stop Date: SPC (Y/N): Date: Set Up/ Reject Reject Sequence ID/ Operation Tool ID Tool # Plan Accept Insp. Work Center ID Description **Run Hours** Code Qty Qty Number Stamp **Draw Nbr Revision Nbr** D3016 RevA / DEO A-1 Weld per dwg A/R 4130 rod Batch: 1/88/5 0.00 100 Large Fab B Q 13-3-80 *100* 0.00 Large Fab Memo Large Fab 1-Cut all tubes as per Dwg D3016 2-Deburr 3-Assemble tubes, fittings and weld as per Dwg D3016 using welding jig DT8597 4-Transfer drill holes from D3017-041 and D3021-041 in seat frame D3016-041 5- Assemble brackets and gusset per dwg and weld 110 QC9- Inspect visual per QS1004- Fusion Welds 0.00 *110* 13-03-20 0.00 Memo

Quality Control

											DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-C	100	NFORM	MANCE / UPE	ATE		OA Classide	Data	
			_,			_					QA Closed:	Date:	
					DISPOSITION				AGAINS	T DEF	PARTMENT	PROCESS	
Work Orde	er:				, Danielle	1		المطيية المتاري	Crosstub			Water Jet	Engineering
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Part N	NO			······································	Use-as-is		1	noforming	Finishin	-		e/Packaging	Other
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Cause	Date	Step	Qty		or Non-conformance	Ch	nief Eng	Descr	iption		Date	Verification	QC Inspector
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	Bending			L	Bend	<u></u>	Grain			-	Ovalized		Pressure/Forced
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	Cuffs				Contamination		Mainte	enance			Part Moved		
	. Heat Tro	eat	•		Countersink		Mislabe	eled			Positioned V	Vrong	_

Misread Offset

Out of Calibration

Out of Sequence

Outside Dimensions

Power Loss/Surge

Other

Inspection Strip in Tube

Torque Waves in Extrusion

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Cut Too Short

Drill Holes

Drawing

Finish Folio

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Work Orde February-21-13				*977	707*							Page 2	2
Item ID: Revision ID:	D3016-041			Accept	*N900	040	100)*	Setup	Start	*N:	S1*	
Item Name:	Seat Frame As	ssembly								Stop	*N:	S2*	
Start Date:	2/21/13	Start Qty: 1.00	*1*		Cust Item l	D:					•	•	
Required Date:	2/28/13	Req'd Qty: 1.00	*1*		Customer:								
Reference:		•							•				•
Approvals:	Process Pla	ın:	Date:	Tooling:	D	ate:	-		Run	Start	*N	R1*	
	QC:		Date:	SPC (Y/N):	D	ate:				Stop	*N	R2*	
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Re Qt		Reject Number	Insp. Stamp	H 200
120		QC5- Inspect part compl	eteness to step on W/O	0.00								nAn.	
120 QC Quality Control		Мето		0.00					13.	<u>03-3</u>	<u>ی</u>	0AG 09 2.89	
120			0 001005 42	0.00					4				ē
*130 *130*		. Grey Sandtex(Ref:4.3.5.	6) per QS1005 4.3	0.00				N	13/	M	1/1	7/2	10
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Powder Coating	66	Install paint START TIN	MPERATURE: 50	, o [-				,	·				·
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0.00

Memo

W

140

Quality Control

NCR:	Yes	/ No				WORK ORDER NON-C	100	NFOR!\	/IANCE / UPDA	TE			
			,								QA Closed:	Date	•
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Part I	No.					Scrap	1 1			Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is			~ 	Finishing	Rec/Stor	e/Packaging	Other
NCR I	Vo.		<u></u>			Work Order Update			Large Fab C	omposite		Supplier	
Root				,	Descri	tion of work order update		nitial	Action		Sign &		
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descripti	ion	Date	Verification	QC Inspector
Doc/Data]										
Equip/Tooling					:								
Operator				١.									
Material									I				
Setup				1	i				I				
Other .									I				
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Landi	ng (Gear				General		,		,	1	_	_
		Bending				Bend		Grain			Ovalized	_	Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route		Hardwa	re .		Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorre	ct	Weld
		Crushed/	Crimped.			Burrs		Instruct	ions Incomplete/Uncl	lear	Part Lost/Mi	issing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	nance		Part Moved		
		Heat Trea	ıt			Countersink		Mislabe	led		Positioned V	Vrong	 ,
		Inspectio	n Strip in	Tube		Cut Too Short		Misread	I		Power Loss/	Surge	Other
		Ripples in	Bend			Drill Holes	Offset						

Out of Calibration

Outside Dimensions

Out of Sequence

Date:

DQA:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

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Work Orde February-21-13				*977	' 07*							Page 3
Item ID: Revision ID: Item Name:	D3016-041 Seat Frame A	ssembly		Accept	*N9000	040	100)* s	Setup S	tart Stop		S1* S2*
Start Date: Required Date: Reference:	2/21/13	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item II Customer:) :					ı V.	
Approvals:		an:				te:	· · · · ·	F		start Stop	*NI *NI	R1* R2*
Sequence ID/ Work Center I	D	Operation Description Identify as per dwg & St	ock Location:	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rejec Qty		Reject Number	Insp. Stamp
150 Packaging Packaging		Memo		0.00				K				GBB.
160		QC21- Final Inspection	- Work Order Release	0.00							-2 -4	\
160		Memo		0.00				M	72	1 <u>3</u> -	05-0	e)

Memo

Quality Control

MLS 13-03-20

											DQA:	Date:	
NCR:	Yes ,	/ No				WORK ORDER NON-	100	NFORM	MANCE / UPDATE		·		
											QA Closed:	Date:	
Work Orde	or:					DISPOSITION			AGA	INST DE	PARTMENT	/PROCESS	
Part I	 No					Rework Scrap Use-as-is Work Order Update		1	Machining Smal	stube Fab shing osite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update		Initial	Action		Sign &		
Cause		Date	Step	Qty	,	or Non-conformance	Ch	nief Eng	Description		Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved													
							AUI	LT CATE	GORY				·
Landi					_	General	_	1	•	_	1	Γ	7
		racks	ot Concer Crimped.		o/s	Bend BOM/Route Broken/Damaged Burrs Contamination		⊣ `	ion Incomplete ions Incomplete/Unclear		Ovalized Over/Under Part Incorre Part Lost/M Part Moved	ct	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
1	⊦	leat Trea	t		1	Countersink		Mislabe	eled :		Positioned V	V rong	

Misread

Out of Calibration
Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish Folio

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Picklist Print

February-21-13 12:41:09 PM

Work Order ID:

97707

Parent Item:

D3016-041

Parent Item Name:

Seat Frame Assembly

Start Date: 2/21/13

Required Date: 2/28/13

Page

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NT0.750W.049 4130 RD Tube .750 x.049	w	Purchased	No			100	f	111.7718	4.3	4.52631	58	19	
				Location		Loc Qty	<u>1</u>	oc Code					
				MAT033	339	9.6217893							
M4130NT0.500W.049 4130 RD Tube .500 x.049	w	Purchased	No		<u> </u>	102.15 100	f	86.3760	4.3	4.52631:	58 13-3-19)	
12012 12010				Location		Loc Qty	<u>I</u>	oc Code					
				MAT032		86.376							
				121	025	1.82							
					1293	37.716 46.84				1.52			
M4130NT1.000W.120 4130 RD Tube 1.00 x .120)wall	Purchased	No	124	273	100	f	17.6700	1.5	1.57894	74, 3.3-	/9	
7130 KB 1400 1.00 X.120	o mun			Location		Loc Oty	<u> </u>	oc Code					
				MAT033		17.67							
				$\overline{12^2}$	1293	17.67				1.57			
D3016-17 Gusset		Manufactured	No			100	Each	12.0000	2	EZ.	/3.3	-/9	
				Location		Loc Qty]	Loc Code					
				WA002		12							
D3016-13 Bracket		Manufactured	No	92.	291	100	Each	9.0000	2	\mathcal{A}^{2}	13-3-/	9	2000 TEXAS OF
				Location		Loc Qty	<u>]</u>	Loc Code					
				WA002		9							
				(90)	292	4				1			

5

DQA:	Date:	

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

									QA Closed:	Date:		
Work Ordei	r:				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS		
Part No	0.				Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Water Jet E Machining Small Fab Prod. Eng. Coor. Thermoforming Finishing Rec/Store/Packaging Supplier Large Fab Composite Supplier					
Root				Descri	ption of work order update	Initial	Ac	ction	Sign &			
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	cription	Date	Verification	QC Inspector	
Ooc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved				•								
<u> </u>		.1	<u> </u>		·	AULT CATE	GORY		- L			
Landin	g Gear				General							
	Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples in	Crimped at n Strip in n Bend	Tube		Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing	Instruct Mainte Mislabe Misrea Offset	ion Incomplete tions Incomplete, enance eled	/Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V Power Loss/	ct sissing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other	
F	Turning S			· -	Finish	 	Sequence					
<u> </u>	Wave/Tw	•		-	Folio		Outside Dimensions					

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Picklist Print

February-21-13 12:41:09 PM

Page 2

Vork Order ID:	97707			
arent Item:	D3016-041		Start Date: 2/21/13	Required Date: 2/28/13
arent Item Name:	Seat Frame Assembly		Start Qty: 1.00	Required Qty: 1.00
3016-15 usset	Manufactured No	100 Each	1.0000 2	13.3.19
	Location	Loc Oty	Loc Code	
	94464×2	90616 1		
020-1 ting	Manufactured No	100 Each	h 16.0000 4	4 /3-3-18
	<u>Location</u>	Loc Qty	Loc Code	
	WA	5 8680 5		
	WA001	11		

NCR: Y	es / No				WORK ORDER NON-O	CONFOR	MANCE / UP	DATE			
									QA Closed:	Date	:
Work Orde	r:	·			DISPOSITION	: :		AGAINST DE	PARTMENT	/PROCESS	
					Rework]	Skid-tube	Crosstube		Water Jet	Engineering
Part N	0				Scrap	1	Machining	Small Fab	3	d. Eng. Coor.	Quality
					Use-as-is	Ther	moforming	Finishing	Rec/Stor	re/Packaging	Other
NCR N	lo				Work Order Update	<u> </u>	Large Fab	Composite	ļ	Supplier	_
Root				Descri	ption of work order update	Initial	Ac	ction	Sign &	:	
Cause	Date	Step	Qty	(or Non-conformance	Chief En	g Desc	cription	Date	Verification	QC Inspector
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Landir	ng Gear				General	 1			7	Г	
	Bending				Bend	Grain			Ovalized	<u> </u>	Pressure/Forced
	Centre No	ot Conce	ntric to C)/S	BOM/Route	Hardv	are .		Over/Under	-	Temperature/Cure
	Cracks				Broken/Damaged	—	tion Incomplete		Part Incorre	 	Weld
	Crushed/	Crimped			Burrs	 	ctions Incomplete,	/Unclear	Part Lost/M	· L	Wrong Stock Pulled
	Cuffs				Contamination	Main	tenance		Part Moved		
į	Heat Trea	at			Countersink	Mislal	peled		Positioned \	Wrong	_
	Inspectio	n Strip in	Tube		Cut Too Short	Misre	ad		Power Loss,	'Surge	Other
	Ripples in	Bend			Drill Holes	Offset					
Ī	Torque W	Vaves in E	xtrusion		Drawing	Out o	f Calibration				
Ī	Turning S	equence			Finish	Out o	f Sequence				
1	Wave/Tw	ist in Tul	oe		Folio	Outside Dimensions					

DQA:

Date:

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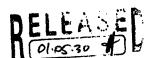
DESIGI	'up	DRAWN BY	DART AEROSPACE L HAWKESBURY, ONTARIO, CANADA	TD		
CHECK	KED	APPROVED	DRAWING NO.	SHEET	REV.	
DATE	- N	TH	TITLE		SCA	
01.0	5.18		SEAT FRAME ASSEMBLY		N	ITS
Α		01.05.18	NEW ISSUE			

QTY	PART NUMBER	DESCRIPTION	MATERIAL
Х	D3016-041	SEAT FRAME ASSEMBLY	N/A
1	D3016-1	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
2	D3016-3	TUBE	AISI 4130N TUBE, Ø0.75 DIA x 0.049 WALL (M4130N-T0750W049)
1	D3016-5	TUBE	AISI 4130N TUBE, Ø0.50 DIA x 0.049 WALL (M4130N-T0500W049)
2	D3016-7	TUBE	AISI 4130N TUBE, Ø0.50 DIA x 0.049 WALL (M4130N-T0500W049)
1	D3016-9	SADDLE	AISI 4130N TUBE, Ø1.00 DIA x 0.120 WALL (M4130N-T1000W120)
1	D3016-11	SADDLE	AISI 4130N TUBE, Ø1.00 DIA x 0.120 WALL (M4130N-T1000W120)
1	D3016-13	BRACKET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
1	D3016-15	GUSSET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
1	D3016-17	GUSSET	AISI 4130N SHEET, 18 GAUGE (M4130N-S049)
2	D3020-1	FITTING	N/A

NOTES

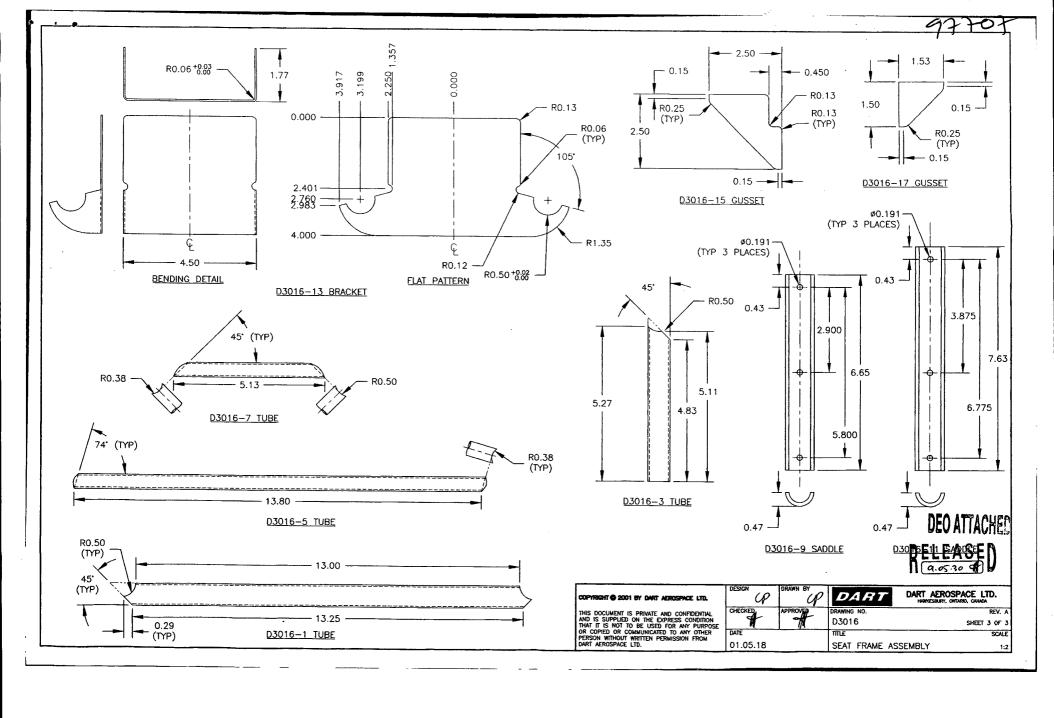
- 1) WELD PER DART QSI 004
- ON SHEET METAL PARTS, BREAK ALL UNMARKED CORNERS 0.020-0.040
- FINISH: POWDER COAT GREY SANDTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- ALL DIMENSIONS ARE IN INCHES 4)
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

DEO ATTACHED



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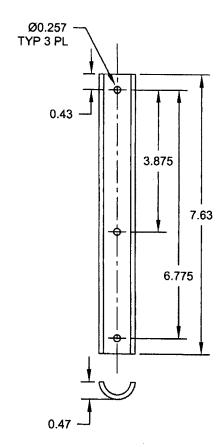
DRAWING I	NO	TITLE			DEV	DADEAL	2002405				
					REV. A	DARIAL	ROSPACE LTD) D.E.O.	NO.	SHEET NO.	SCALE
D3016		SEAT FRAN	ME ASSEM	BLY	_	ENGINE	ERING ORDER	D301	6-A-1	SHEET 1 OF 1	NTS
DRAWN	1		CHECKED	A	<i>)</i>	MFG. APPR.	R	APPROVE	5 MA	DE APPR.	
DATE	10.01.	29	DATE	10:0	175	DATE	10,01.29	DATE	10.01.29	DATE 10.01-29	

PURPOSE:
TO REVISE D3016-11 SADDLE'S HOLE SIZES

CHANGE:

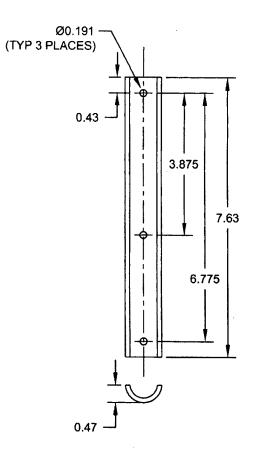
DETAIL D3016-11 SADDLE (SHEET 3): Ø0.257 TYP 3 PL WAS Ø0.191 (TYP 3 PLACES) AS SHOWN:

IS:



D3016-11 SADDLE

WAS:



D3016-11 SADDLE

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